Claims

1. Method for improving traffic distribution in a communication network with multipath routing, said communication network being made up of nodes (j, k1, k2, k3) and links, with one node (j) of the communication network having a number of outgoing links, which correspond to alternative paths for routing to a destination and to which traffic to the destination can be distributed, according to which

- distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) for distribution of the traffic to the destination are assigned to the outgoing links and
- the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) are adjusted according to a parameter related to the load or availability of the individual links, with, in the case of two links with different parameter values, the distribution weighting of the link with the higher parameter value being reduced in relation to the distribution weighting of the other link.

2. Method according to claim 1,
characterized in that
the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) are adjusted according to the gap between the parameter for the respective link and the mean value for the parameter taken over the number of outgoing links.

3. Method according to claim 2,
characterized in that
for all the links of the number, the parameter value of which is different from the mean value, the distribution weightings

(w(j,k1,D), w(j,k2,D), w(j,k3,D)) are adjusted, with the distribution weightings of links, the parameter value of which is above the mean value, being reduced and the distribution weightings of links, the parameter value of which is above the mean value being increased.

4. Method according to claim 3,
characterized in that
distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) are increased or reduced in proportion to the gap between the parameter value for the respective link and the mean value.

5. Method according to one of the preceding claims,
characterized in that
- the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) are adjusted iteratively, with an adjustment of the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) being carried out with each step.

6. Method according to claim 5,
characterized in that
- the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) are initialized with start values,
- a number of iterations are carried out and
- the distribution weightings resulting after the number of iterations are used for routing in the communication network to the destination.

7. Method according to claim 5 or 6,
characterized in that
when the distribution weightings are modified, an attenuation variable that is a function of the number of the iteration is

used, bringing about a reduction in the modification of distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) that increases with the number of iterations.

8. Method according to one of claims 5 to 7, characterized in that
- the parameter is defined during the first iteration by the absolute traffic load or the relative traffic load related to the link bandwidth,
- the value of the parameter is modified during the iterations for the next iteration, with the modification taking into account the traffic transported via the link to the destination.

9. Method according to claim 8, characterized in that
- the modification is effected by adding the traffic transported via the link to the destination multiplied by a factor.

10. Method according to one of the preceding claims, characterized in that
the traffic distribution in the communication network is recalculated using the resulting distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)).

11. Method according to one of the preceding claims, characterized in that
the method is implemented for a number of nodes of the communication network, at which traffic distribution takes place.

12. Method according to one of the preceding claims, characterized in that
the method is implemented for a number of different destinations during the course of routing within the communication network.

13. Method according to one of the preceding claims, characterized in that
the parameter is defined by the absolute traffic load, the relative traffic load related to the link bandwidth, traffic-related costs incurred during link usage, link availability, the transit time of the respective link or the load capacity of the end nodes of the respective link.

14. Method according to one of the preceding claims, characterized in that
the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) of a node to a destination are standardized and this standardization is maintained during modification.

15. Method according to one of the preceding claims, characterized in that
the distribution weightings (w(j,k1,D), w(j,k2,D), w(j,k3,D)) for multipath routing are adjusted in the context of the ECMP (Equal Cost Multi Path) method.

16. Router with a computer program for implementing a method according to one of claims 1 to 15.